

## § 160.016-1

which may have been found necessary during construction or testing. If the manufacturer desires more than one set of approved plans, additional copies shall be submitted at that time.

(d) Upon receipt of corrected drawings, material affidavits, and satisfactory test report, the Commandant will issue a certificate of approval. No change shall be made in the design or construction without first receiving permission of the Commandant via the Commander of the Coast Guard District in which the lifeboat winch is built.

[CGFR 49-18, 14 FR 5112, Aug. 17, 1949, as amended by CGFR 58-31, 23 FR 6884, Sept. 6, 1958]

### Subpart 160.016—Lamps, Safety, Flame, for Merchant Vessels

SOURCE: CGFR 50-12, 15 FR 3093, May 20, 1950, unless otherwise noted.

#### § 160.016-1 Applicable specification.

(a) The following specification of the issue in effect on the date flame safety lamps are manufactured forms a part of this subpart:

(1) Military specification:

MIL-L-1204, Lamps, Safety, Flame.

(b) A copy of the above specification shall be kept on file by the manufacturer together with the approved plan and certificate of approval issued by the Coast Guard.

#### § 160.016-2 Requirements.

(a) Flame safety lamps for use on merchant vessels shall comply with the construction requirements of Military Specification MIL-L-1204.

(b) [Reserved]

#### § 160.016-4 Marking.

(a) Flame safety lamps shall be permanently and legibly marked with the name and address of the manufacturer and the type or model designation for the lamp.

(b) [Reserved]

#### § 160.016-5 Procedure for approval.

(a) *General.* Flame safety lamps are approved for use on merchant vessels only by the Commandant, United States Coast Guard, Washington, DC

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20226. Correspondence relating to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which such devices are manufactured.

(b) *Pre-approval sample and plan.* In order to apply for approval of a flame safety lamp for use on merchant vessels, submit one complete sample, together with four copies of an arrangement plan (parts drawings are not required), together with a statement that the lamp meets the construction requirements of Military Specification MIL-L-1204, as amended, to the Commander of the Coast Guard District who will forward same to the Commandant for determination as to its suitability for use on merchant vessels.

### Subpart 160.017—Chain Ladder

SOURCE: CGD 74-140, 46 FR 63286, Dec. 31, 1981, unless otherwise noted.

#### § 160.017-1 Scope.

(a) This subpart contains standards and approval and production tests for chain ladders used on a merchant vessel to get on and off the vessel in an emergency.

(b) The requirements in this subpart apply to a chain ladder designed for use along a vertical portion of a vessel's hull.

#### § 160.017-7 Independent laboratory.

The approval and production tests in this subpart must be conducted by or under the supervision of an independent laboratory accepted by the Coast Guard under subpart 159.010 of this chapter.

#### § 160.017-9 Approval procedure.

(a) *General.* A chain ladder is approved by the Coast Guard under the procedures in subpart 159.005 of this chapter.

(b) *Approval testing.* Each approval test must be conducted in accordance with § 160.017-21.

(c) *Approval of alternatives.* A chain ladder that does not meet the materials, construction, or performance requirements of this subpart may be approved if the application and any approval tests prescribed by the Commandant in place of or in addition to

the approval tests required by this subpart, show that the alternative materials, construction, or performance is at least as effective as that specified by the requirements of this subpart. The Commandant may also prescribe different production tests if the tests required by this subpart are not appropriate for the alternative ladder configuration.

#### § 160.017-11 Materials.

(a) *Suspension members.* Each suspension member of a chain ladder must be a continuous length of non-kinking chain, such as single loop lock link coil chain, with a minimum breaking strength of at least 16 kN (3,560 lbs.).

(b) *Metal parts.* Each metal part of a ladder must be made of corrosion-resistant metal or of steel galvanized by the hot dip process after the part is formed. If the ends of galvanized fasteners are peened over to lock them in place, a corrosion resisting surface treatment must be applied to each peened surface.

(c) *Wooden parts.* Each wooden part of a ladder must be made of hardwood that is free of defects affecting its strength or durability.

(d) *Wood preservative.* After each wooden part is formed and finished, it must be treated with water-repellant wood preservative that is properly applied.

(e) *Lashing rings.* The inside diameter of each lashing ring must be at least 75 mm (3 in.). Each lashing ring must have a minimum breaking strength of at least 16 kN (3,560 lbs.).

#### § 160.017-13 Construction.

(a) *General.* Each chain ladder must have two suspension members. Each step in the ladder must be supported at each end by a suspension member.

(b) *Suspension member.* The distance between the two suspension members must be at least 400 mm (16 in.), but not more than 480 mm (19 in.). The chain between each top lashing ring and the first step must be long enough so that the distance between the center of the lashing ring and the top of the first step is approximately 600 mm (24 in.).

(c) *Lashing rings.* A lashing ring must be securely attached to the top and

bottom of each suspension member. The means of attachment must be at least as strong as the chain and the lashing ring.

(d) *Thimble or wear plate.* A thimble or wear plate must be attached to the chain where it can slide on its connections to the lashing rings.

(e) *Steps.* Each step of a ladder must have two rungs arranged to provide a suitable handhold and stepping surface. The distance between steps must be uniform. This distance must be between 300 mm (12 in.) and 380 mm (15 in.).

(f) *Rungs.* Step rungs must meet the following requirements:

(1) Each rung must be wooden, or a material of equivalent strength, durability, handhold, and step surface characteristics.

(2) In order to provide a suitable handhold and step surface, the width of each rung must be at least 40 mm (1½ in.) and the thickness must be at least 25 mm (1 in.), but not more than 40 mm (1½ in.).

(3) The distance between the rungs in each step must be uniform. This distance must be between 40 mm (1½ in.) and 65 mm (2½ in.).

(4) Each rung must be attached to a spacer ear by a method that prevents the rung from rotating and that supports it in a horizontal position when the ladder is hung vertically.

(g) *Spacer ears.* Spacer ears must meet the following requirements:

(1) All spacer ears on a ladder must be the same size and shape.

(2) The top and bottom of each spacer ear must be attached to a suspension member.

(3) The top point of attachment must be at least 100 mm (4 in.) above the top surfaces of the rungs attached to the spacer ear.

(4) Each spacer ear made of sheet metal must have features such as formed ribs, rolled flange edges, and stress relief holes at the ends of cuts, to prevent the ear from bending or tearing.

(h) *Fasteners.* Each fastening device must have a means to prevent the device from loosening.